JM

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/633,927	08/04/2003	Ryu Yokoyama	P/1909-163	4959

2352 7590 11/23/2005

OSTROLENK FABER GERB & SOFFEN
1180 AVENUE OF THE AMERICAS
NEW YORK, NY 100368403

EXAMINER	
DIACOU, ARI M	
ART UNIT	**PAPER NUMBER**
3663	

DATE MAILED: 11/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/633,927	YOKOYAMA, RYU	
	Examiner	Art Unit	
	Ari M. Diacou	3663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 October 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above claim(s) *1-10* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *11-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *04 August 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____. Aug 31, 2005
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of invention II drawn to the method in claims 11-15 in the reply filed on 10-26-2005 is acknowledged.

2. It is noted that the applicant did not provide an election of species as per paragraph 4 of the office action. In the interest of compact prosecution, the examiner will withdraw the species election requirement. However, if necessary, the examiner may at a later date, reinstitute the election requirement.

3. Claims 1-10 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention I, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 10-26-2005.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 11-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. The phases "that a failure occurred" and "in the case that a failure occurred" are considered to be phrases that suggest or make optional but does not require steps to be performed or does not limit the scope of a claim or claim limitation (MPEP § 2106(II,C)). Accordingly, the metes and bound of the claim cannot be ascertained by one having ordinary skill in the art.

7. The term "failure" in claims 11-15 is a relative term which renders the claim indefinite. The term "failure" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. e.g. what types of failures are detected, total failure, partial failure etc.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 11-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Nimiki et al. (USPAP No. 2001/0050802).

- Regarding claim 11, Nimiki discloses an optical amplification method in an optical transmission system, in which one or more first light sources for Raman amplification that amplify signal light transmitting in an optical transmission line and one or more second light sources for Raman amplification that are disposed at the positions adjoining said one or more first light sources for Raman amplification via said optical transmission line are provided, comprising the steps of:
    - amplifying said signal light by said one or more first and second light sources for Raman amplification; [¶ 0098]
    - transmitting said signal light in a deteriorated state of the characteristic of said signal light by that a failure occurred at one of the pumping light sources in said one or more first and second light sources for Raman amplification; [Inherent, if at any time, an error occurs in an optical amplifier that would change the gain profile, the signal will be transmitted with a deteriorated characteristic until some(one/thing) corrects it.]
    - detecting said deterioration state of the characteristic of said signal light by one of said second light sources for Raman amplification; and [¶ 0114]
    - recovering said deteriorated state of the characteristic of said signal light to a normal state before deteriorated by emitting spare pumping light from a spare pumping light source disposed in one of said second light sources for Raman amplification. [¶ 0118-0125]

- Regarding claim 12, Nimiki discloses an optical amplification method in an optical transmission system in accordance with claim 11, wherein: in case that a failure occurred at one of said pumping light sources, said spare pumping light is emitted from said spare pumping light source so that the output level of said signal light becomes the same output level before said failure occurred. [¶ 0103]
- Regarding claim 13, Nimiki discloses an optical amplification method in an optical transmission system in accordance with claim 11, wherein: in case that a failure occurred at one of said pumping light sources, said spare pumping light is emitted from said spare pumping light source so that the gain wavelength characteristic of said signal light becomes the same gain wavelength characteristic before said failure occurred. [¶ 0103]
- Regarding claim 14, Nimiki discloses an optical amplification method in an optical transmission system in accordance with claim 11, wherein: plural pumping light sources emitting plural pumping light of plural wavelengths are used as said pumping light source, and plural spare pumping light sources emitting plural spare pumping light of plural wavelengths corresponding to said plural pumping light sources are used as said spare pumping light source. [¶ 0103]
- Regarding claim 15, Nimiki discloses an optical amplification method in an optical transmission system in accordance with claim 11, wherein: outputs from said pumping light source and said spare pumping light source are

controlled by respective control circuits in said one or more first and second light sources for Raman amplification. [¶ 0103]

10. As to limitations which are considered to be inherent in a reference, note the case law of In re Ludtke, 169 U.S.P.Q. 563; In re Swinehart, 169 U.S.P.Q. 226; In re Fitzgerald, 205 U.S.P.Q. 594; In re Best et al, 195 U.S.P.Q. 430; and In re Brown, 173 U.S.P.Q. 685, 688.

11. While patent drawings are not drawn to scale, relationships clearly shown in the drawings of a reference patent cannot be disregarded in determining the patentability of claims. See In re Mraz, 59 CCPA 866, 455 F.2d 1069, 173 USPQ 25 (1972).

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

13. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

14. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

15. Claims 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nimiki et al. as applied to claim 11 above. Nimiki discloses the invention with all the limitations of claim 11, as well as the use of spare pumps, as well as turning them on and off as needed [¶ 0152] [¶ 0163] [¶ 0168], as well as an equation and computer capable of calculating, based on any information given to it, how to construct an arbitrary gain characteristic [¶ 0103]. Nimiki fails to explicitly disclose turning the spare pumps on when the original pumps burn out (Nimiki has other ways to accomplish this with pumps of other frequencies). It is considered inherent that the original pump and the spare pump would have the same Therefore, it would have been obvious to one skilled in the art (e.g. an

optical engineer) at the time the invention was made, to turn on Nimiki's spare pumps in the case of the original pumps failing, for the advantage of increased control of the gain characteristic.

Conclusion

16. The references made herein are done so for the convenience of the applicant. They are in no way intended to be limiting. The prior art should be considered in its entirety.

17. The prior art which is cited but not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ari M. Diacou whose telephone number is (571) 272-5591. The examiner can normally be reached on Monday - Friday, 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Keith can be reached on (571) 272-6878. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AMD 11/10/2005

JACK KEITH
SUPERVISORY PATENT EXAMINER